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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,504	07/21/2003	Satoshi Seo	12732-160001	4688

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EXAMINER	
GARRETT, DAWN L	

ART UNIT	PAPER NUMBER
1774	

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,504	SEO ET AL.	
	Examiner	Art Unit	
	Dawn Garrett	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) *1,2,4-13 and 15-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,14 and 23-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/19/2006
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Request for Reconsideration

1. This Office is responsive to the applicant's response received January 19, 2006. Claims 1-32 are present in the application. Claims 1, 2, 4-13, and 15-22 are withdrawn from consideration. Claims 3, 14, and 23-32 are currently under consideration.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 3, 14 and 23-32 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Bernius et al. (US 2002/0153523) in view of Kono et al. (5,917,693) in further view of Nakayama (US 5,943,154). Bernius et al. teaches organic light emitting diodes on plastic substrates (see title). The Bernius et al. device comprises an optoelectrically active film between two electrodes per the instant anode, cathode and electroluminescence layer (see abstract). Bernius et al. also teaches a separate hole transporting layer (see par. 35) per instant claim 3. Bernius et al. further teaches the anode may be coated with a thin layer of a conducting substance, which may include doped polyaniline (see par. 35). The coating on the anode reads upon the instant "buffer layer" in contact with the anode. Bernius et al. fails to teach the specific polyaniline dopant "TCNQ". Kono et al. teaches it is known in the art to dope polyaniline with TCNQ to form an electrically conductive polyaniline (see col. 5, lines 31-35). It would have been obvious to one of ordinary skill in the art to have doped the polyaniline taught by Bernius et al. with TCNQ, because Kono et al. teaches polyaniline doped with TCNQ is an electrically conductive material as required by Bernius et al. Because the references disclose the same materials as set forth by applicant, the redox properties of claims 25, 28, and 31 are deemed to be

inherent. With regard to claims 26, 29, and 32, emeraldine base of polyaniline is specifically taught by Bernius et al. as a type of polyaniline that is doped (see par. 35). Kono et al. fails to teach a specific derivative of TCNQ comprising a halogen as required by the present claims. Nakayama teaches TCNQ and equivalent materials including TCNQ derivatives comprising halogen substituents and DCNQI derivatives with halogen substituents as having similar electronic properties (see Nakayama col. 12, lines 3-54; also see listing of derivatives in instant specification pages 12-14). It would have been obvious to one of ordinary skill in the art to substitute the TCNQ and DCNQI derivatives taught by Nakayama for TCNQ, because the materials have similar properties and would be expected to behave similarly to TCNQ in a device, absent evidence otherwise.

Response to Arguments

4. Applicant's arguments filed January 19, 2006 have been fully considered but they are not persuasive.

Applicant argues that the secondary reference Kono is directed to a secondary cell and that "the mere use of polyaniline doped with TCNQ in a secondary electric cell would not have motivated one of ordinary skill in the art to modify the polyaniline of Bernius". The examiner submits that the secondary reference is relied upon to teach a specific dopant for polyaniline in order to form an electrically conductive polyaniline (see col. 5, lines 31-35). The combination of references is proper because the primary reference specifically teaches a doped polyaniline (see par. 35). Nakayama et al. is relied upon to teach equivalent materials to TCNQ.

Applicant further argues neither Kono nor Bernius recognize damage to an electroluminescence element by water and moisture is reduced when a polymer compound is

doped with TCNQ. The secondary references are not required to recognize the improvements discovered by applicant. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dawn Garrett
Primary Examiner
Art Unit 1774

D.G.
April 10, 2006